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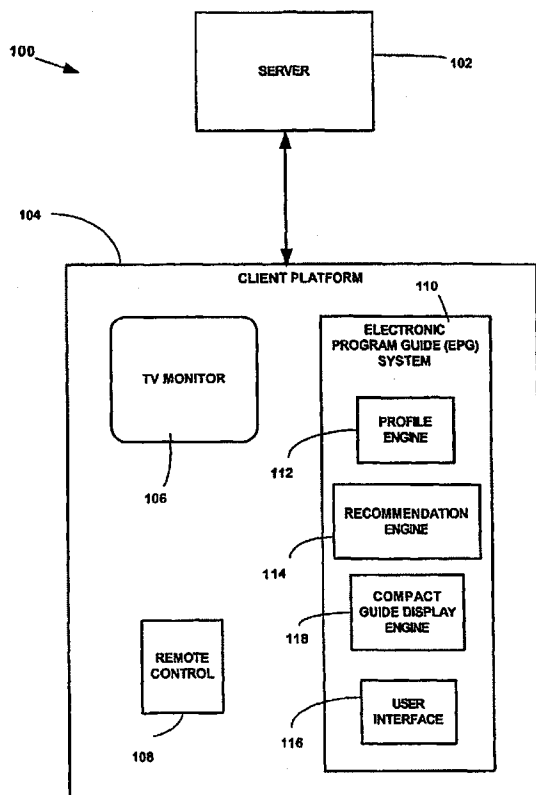
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[Continued on next page]

(54) Title: **METHODS AND SYSTEMS FOR DISPLAYING RECOMMENDED CONTENT ALTERNATIVES**

(57) Abstract: In a content distribution system, in which broadcast content is distributed and provided to a television viewer, a method and apparatus for providing a compact guide display of a plurality of television show or program recommendations, optionally with descriptions, which are available and selectable for viewing by a viewer without interrupting the presently-viewed content.



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**METHODS AND SYSTEMS FOR DISPLAYING  
RECOMMENDED CONTENT ALTERNATIVES**

5

**PRIORITY CLAIM**

The present application claims priority to co-pending Provisional Patent Application No. 60/359,930 entitled Methods and Systems for Displaying Recommended Content Alternatives, filed on February 25, 2002, and having a common inventive entity.

**INCORPORATION BY REFERENCE**

The present application for United States Patent incorporates by reference the following commonly-owned patent applications, as if set forth in their entirety herein, for all purposes:

WO 0120481A2 {Predictive Network PCT application};  
U.S. Patent Application No. 60/338,398 filed December 7, 2001;  
20 U.S. Patent Application entitled: "Television Program Navigation Guide" filed December 5, 2001;  
U.S. Patent Application entitled: "Method and System for Selective Initial Television Channel Display" filed October 22, 2001;  
U.S. Patent Application No. 09/969,911 filed October 3, 2001;  
25 U.S. Patent Application entitled: "Method and System for Parsing Purchase Information from Web Pages" filed August 29, 2001;  
U.S. Patent Application No. 09/928,493 filed August 13, 2001;  
U.S. Patent Application No. 09/877,974 filed June 7, 2001;  
U.S. Patent Application No. 09/558,755 filed April 21, 2001;  
30 U.S. Patent Application No. 60/282,028 filed April 6, 2001;  
U.S. Patent Application No. 09/798,337 filed March 2, 2001;  
U.S. Patent Application No. 09/777,807 filed February 5, 2001;  
U.S. Patent Application No. 09/767,693 filed January 23, 2001; and

## FIELD OF THE INVENTION

5 The present invention relates generally to interfaces for use in television and other content distribution systems, which provide program selection information to a viewer, and in particular, to a method and system for displaying recommended content alternatives.

## BACKGROUND OF THE INVENTION

10 With hundreds of TV channels and scheduled programs from which to choose, together with personal video recorder (PVR)-recorded shows, pay-per-view (PPV), video-on-demand (VOD) and other content, TV viewers and other content users are faced with a nearly overwhelming choice of entertainment and other content options.

15 In response, various electronic or interactive programming guide (EPG/IPG) systems have been proposed or developed to enhance TV viewers' ability to navigate through and select programming. Examples of such systems are set forth in the following U.S. and foreign patent documents, among others, the disclosures of which are incorporated herein by reference as if set forth in their entirety here:

20	U.S. Pat. 6,177,931	Alexander et al.
	U.S. Pat. 6,163,316	Killian
	U.S. Pat. 6,005,597	Barrett et al.
	WO 0049801A1	Yuen et al.
	WO 0033224A1	Yuen

25 Most EPG systems are capable of generating on-screen displays of content, some in a time- and channel-based grid format. While such displays have utility, they generally do not enable users to quickly and easily find content of interest. If a viewer decides, during viewing of a first television show, that he or she is interested in  
30 alternatives, the viewer must use the remote control buttons to leave the show he or she is presently viewing and direct the system to display a list of alternatives. The viewer must therefore interrupt his or her enjoyment of the presently viewed content in order to see (or

even become generally aware of) one or more alternatives.

In addition, since alternatives are not presented during viewing of the television show, the viewer must actively decide that he or she is interested in alternatives (even without knowing what alternatives are available), in order to see even a listing of  
5 alternatives.

Finally, many on-screen displays typical of the prior art (such as that shown in FIG. 2 herein) are relatively complex and potentially daunting to many viewers -- and if not generated with reference to a recommendation process, populated by content of little or no interest to the viewer.

10 It is therefore desirable to provide methods, devices and systems that enable viewers to see descriptions of alternative content without leaving their currently-viewed television shows, and without the necessity of additional button pushes or other user interaction.

It is also desirable to provide such methods, devices and systems that constantly  
15 display a relatively simple and compact selection of alternative content, wherein the user can obtain additional information quickly and easily.

It is also desirable to provide such displays based on top recommendations of content likely to be of greatest interest to the current viewer.

## 20 SUMMARY OF THE INVENTION

In view of the aforementioned drawbacks of the prior art, one aspect of the present invention provides methods, devices and systems for enabling a compact overlay display of a number of top recommendations (optionally with descriptions) that a viewer can see, and from which the viewer can select, without leaving his or her presently-  
25 viewed content.

## BRIEF DESCRIPTION OF THE DRAWING FIGURES

Features and advantages of the present invention will become apparent to those skilled in the art from the description below, with reference to the following drawing  
30 figures, in which:

FIG. 1 is a block diagram of a prior art content distribution system.

FIG. 2 is a drawing showing a typical screen display generated by a prior art EPG system.

FIG. 3 depicts a screen display generated by the system embodying the present invention.

FIG. 4 depicts a screen display, as taught in the present invention, in which the choice of a content alternative displays more detailed information about the content alternative; and

FIG. 5 is a block diagram showing a content distribution system incorporating the compact guide display engine and process of the present invention.

## DESCRIPTION OF PREFERRED EMBODIMENTS

Prior Art Systems: The structure and operation of conventional EPG and IPG systems, as well as associated television systems, Internet systems, and subscriber devices, including set-top boxes (STBs), monitors, pointing devices, TV remote controls, and other control devices, are well-known in the art. Examples are set forth in the U.S. and foreign patent documents listed above, the teachings of which are incorporated herein by reference as if set forth herein in their entirety.

FIG. 1 illustrates a conventional content delivery system 100. The content delivery system 100 includes a server 102 for providing program content to a client platform 104. The client platform 104 includes a television monitor 106 for viewing program content, a remote control unit 108 for selecting and controlling program content, and an electronic program guide (EPG) or interactive program guide (IPG) system 110. Within the EPG system 110, there is shown a profile engine 112, a recommendation engine 114, and a user interface (UI) 116.

In a conventional EPG or IPG 110 like that shown in FIG. 1, the recommendation engine 114 rates each television show or other content available for viewing, using known methods described in the U.S. and foreign patent documents incorporated herein by reference. In particular, the recommendation engine 114 may use profile information made available by profile engine 112 to generate the ratings or recommendations. One or

more user interfaces 116 make use of these ratings to assist the viewer in finding desired programming, often by generating ordered, ranked lists of shows and giving preferred placement within such lists to shows with higher ratings. The lists are then displayed to viewers using known user methods and devices in the UI layer 116. Many viewers rely on the ordered, ranked lists generated by such EPGs to select programs to be viewed. By way of example, using some prior art systems, a viewer might select an option such as "show highest ranked Sports program" for his or her next one-hour segment of viewing.

One drawback of on-screen displays typical of the prior art, however, is that if a viewer decides, during viewing of a first television show, that he or she is interested in alternatives, the viewer must use the remote control buttons to leave the show he or she is presently viewing and direct the system to display a list of alternatives. The viewer must therefore interrupt his or her enjoyment of the presently-viewed content in order to see (or even be generally aware of) one or more alternatives. In addition, since alternatives are not presented during viewing of the television show, the viewer must actively decide that he or she is interested in alternatives in order to see them at all. Viewers might therefore miss a program of greater interest than the currently viewed program.

FIG. 2 shows a typical on-screen display 120 as found in the prior art. The on-screen display presents program information in a grid format 122, which is relatively complex and potentially daunting to many viewers, and if not generated with reference to a recommendation process, such as by the recommendation engine 114 in FIG. 1, the on-screen display 120, may be populated by content of little or no interest to the viewer.

Present Invention: Accordingly, as shown in FIG. 3, one embodiment of the present invention takes the form of a compact guide display 134 that allows viewers to see listings of a number of names and descriptions of top recommendations without leaving the show they are currently viewing. In FIG. 3, a display unit 130 is displaying content 132 to a viewer. In this case, the viewer is watching a basketball game. A compact guide display 134 is illustrated as a screen overlay, which displays five recommendations (136, 138, 140, 142, 144) for available alternative viewing.

Using the remote control unit 108, a user may click on any of the recommendations (136, 138, 140, 142, 144) to either instantly begin viewing the selected



content or view additional information about the alternatives. FIG. 4 illustrates the latter instance, where a user has selected one of the program recommendations (136, 138, 140, 142, 144) and the system has responded by displaying additional information 146 about the selected program. Alternatively, users can hover the cursor over a listing to obtain  
5 additional information 146. In another practice of the invention, clicking or hovering can open a picture-in-picture window providing instant viewing of the alternative content while allowing the viewer to continue to view current content.

The compact guide display 134 could be displayed at all times during program viewing as a translucent or opaque overlay; it could be placed at the top, bottom or side  
10 of the screen; it could be set to toggle on or off in response to pressing of a remote control button; or it could be set to be displayed from time-to-time or periodically during a viewing session.

The compact guide display 134 could show top recommendations across all content, or across a single genre. It could receive its recommendations from a  
15 conventional rating or recommendation engine 114. The recommendation engine 114 could use user profiles to determine appropriate recommendations for the user.

In addition, the compact guide 134 could present recommendations in preference order, either based on other users' top selections (across all users or across users with similar profiles or viewing histories), or based on profiles stored for the current user.

20 The recommendations (136, 138, 140, 142, 144) can be ranked in accordance with viewer preferences, rather than channel numbers, and the recommendations can be across all media and content available to the content distribution system, including terrestrial television, cable, satellite, personal video recorder (PVR)-recorded shows, pay-per-view (PPV), video-on-demand (VOD), local PC-stored and others.

25 The alternatives presented could be for content items available immediately, or content available in the near future.

In one embodiment of the invention, as shown in FIG. 5, the compact guide display 134 is generated by a compact guide display engine 118, as shown in the content distribution system 100 of FIG. 5, which communicates with the recommendation engine  
30 114 and user interface 116 of the otherwise conventional content distribution system 100.

Alternatively, the compact guide display 134 could be operated without the use of a recommendation engine 114, using various alternative selection criteria to select content items to be listed.

5 Having described the illustrated embodiments of the present invention, it will be apparent that modifications can be made without departing from the spirit and scope of the invention, as defined by the appended claims.

**CLAIMS**

We claim:

5

1. In a content distribution system including an electronic programming guide (EPG) having a recommendation process responsive to ratings of content to generate recommendations of content to be viewed by a human viewer, a method of displaying a listing of content items for viewing by a viewer, the method comprising:

10       generating a guide display process, in communication with the recommendation process, to generate a displayable listing of top recommendations for viewing by the viewer; and

              responsive to the guide display process, displaying on a display screen, during display of a first content item, a compact guide display showing the listing of top  
15       recommendations, the compact guide display being sized and situated on the display screen so as to enable the viewer to continue to view a substantial portion of the display of the first content item while simultaneously viewing the listing.

2. The method of claim 1 further comprising:

20       generating a user interface process responsive to viewer input to enable a viewer to designate at least one of the recommendations to either begin viewing the content item corresponding to the recommendation or view additional information about the content item.

25       3. The method of claim 1 further comprising:

              generating a user interface process responsive to viewer input to enable a viewer to designate at least one of the recommendations and in response to such designation, to open a display area providing instant viewing of the content item corresponding to the recommendation while simultaneously allowing the viewer to continue to view the first  
30       content item.

4. The method of claim 1 further comprising:  
displaying the compact guide display at all times during program viewing as any  
of a translucent or opaque overlay.
- 5
5. The method of claim 1 further comprising:  
enabling the viewer to determine the placement, sizing, and display time of the  
compact guide display.
- 10
6. The method of claim 1 wherein the compact guide display can be toggled on  
and off by the viewer.
7. The method of claim 1 wherein the viewer can set the compact guide display  
to be displayed from time-to-time or periodically during a viewing session.
- 15
8. The method of claim 1 wherein the listing of top recommendations shown by  
compact guide display is based upon all content available to the content distribution  
system, whether local or remote to a viewer's local processing device.
- 20
9. The method of claim 1 wherein the listing of top recommendations shown by  
the compact guide display is based upon a single genre or category of content.
10. The method of claim 1 wherein the compact guide display is generated in  
response to information from a rating engine, recommendation engine or profile engine.
- 25
11. The method of claim 1 wherein the listing of top recommendations shown by  
compact guide display is in preference order.
12. The method of claim 1 wherein the listing of top recommendations shown by  
the compact guide display is in preference order based on other viewers' top selections,
- 30

the other viewers' top selections being generated across all viewers or across viewers with similar profiles or viewing histories.

13. The method of claim 1 wherein the listing of top recommendations shown by the compact guide display is in preference order based on profiles stored for the current viewer.

14. The method of claim 1 wherein the listing of top recommendations shown by the compact guide display are ranked in accordance with viewer preferences rather than channel numbers.

15. The method of claim 1 wherein the compact guide display presents recommendations for content items available immediately or in the near future.

16. In a content distribution system including an electronic programming guide (EPG) having a recommendation process responsive to ratings of content to generate recommendations of content to be viewed by a human viewer, a system for displaying a listing of content items for viewing by a viewer, the system comprising:

means for generating a guide display process, in communication with the recommendation process, to generate a displayable listing of top recommendations for viewing by the viewer; and

means, responsive to the guide display process, for displaying on a display screen, during display of a first content item, a compact guide display showing the listing of top recommendations, the compact guide display being sized and situated on the display screen so as to enable the viewer to continue to view a substantial portion of the display of the first content item while simultaneously viewing the listing.

17. The content distribution system of claim 16 further comprising:  
means, operative in response to viewer input, for generating a user interface process, to enable the viewer to designate at least one of the top recommendations for

viewing the content item corresponding to the designated recommendation or for viewing additional information about the content item corresponding to the designated recommendation.

5           18. The content distribution system of claim 16 further comprising:  
            means, operative in response to viewer input, for generating a user interface  
            process, to enable the viewer to designate at least one of the top recommendations;  
            the user interface process generating means being further operative to open a  
10           display area providing instant viewing of the content item corresponding to the  
            designated recommendation while simultaneously allowing the viewer to continue  
            viewing the first content item.

            19. The content distribution system of claim 1 wherein the compact guide  
            display displaying means is operative to display the compact guide display at all times  
15           during program viewing as any of a translucent or opaque overlay.

            20. The content distribution system of claim 1 wherein the compact guide  
            display displaying means is further operative to enable the viewer to determine the  
            placement, sizing, and display time of the compact guide display.

20           21. The content distribution system of claim 1 wherein the compact guide  
            display displaying means is further operative to allow the guide display to be toggled on  
            and off by the viewer.

25           22. The content distribution system of claim 1 wherein the compact guide  
            display displaying means is operative to display the compact guide display from time-to-  
            time or periodically during a viewing session.

            23. The content distribution system of claim 1 wherein the compact guide  
30           display displaying means is operative to display the listings of top recommendations

based upon all content available to the content distribution system, whether local or remote to a viewer's local processing device.

24. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to display the listing of top recommendations based upon a single genre or category of content.

25. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to generate the compact guide display in response to information from a rating engine, a recommendation engine or a profile engine.

26. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to present the listing of top recommendations in preference order.

27. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to present the listing of top recommendations based upon other viewers' top selections where the other viewers' top selections are based upon all viewers or upon viewers with similar profiles or viewing histories.

28. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to present the listing of top recommendations in preference order based upon profiles stored for the viewer.

29. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to rank the listing of top recommendations in accordance with the viewer's preferences rather than channel numbers.

30. The content distribution system of claim 1 wherein the compact guide display displaying means is operative to present the listing of top recommendations based

upon immediately available content items or content items that will be available in the near future.



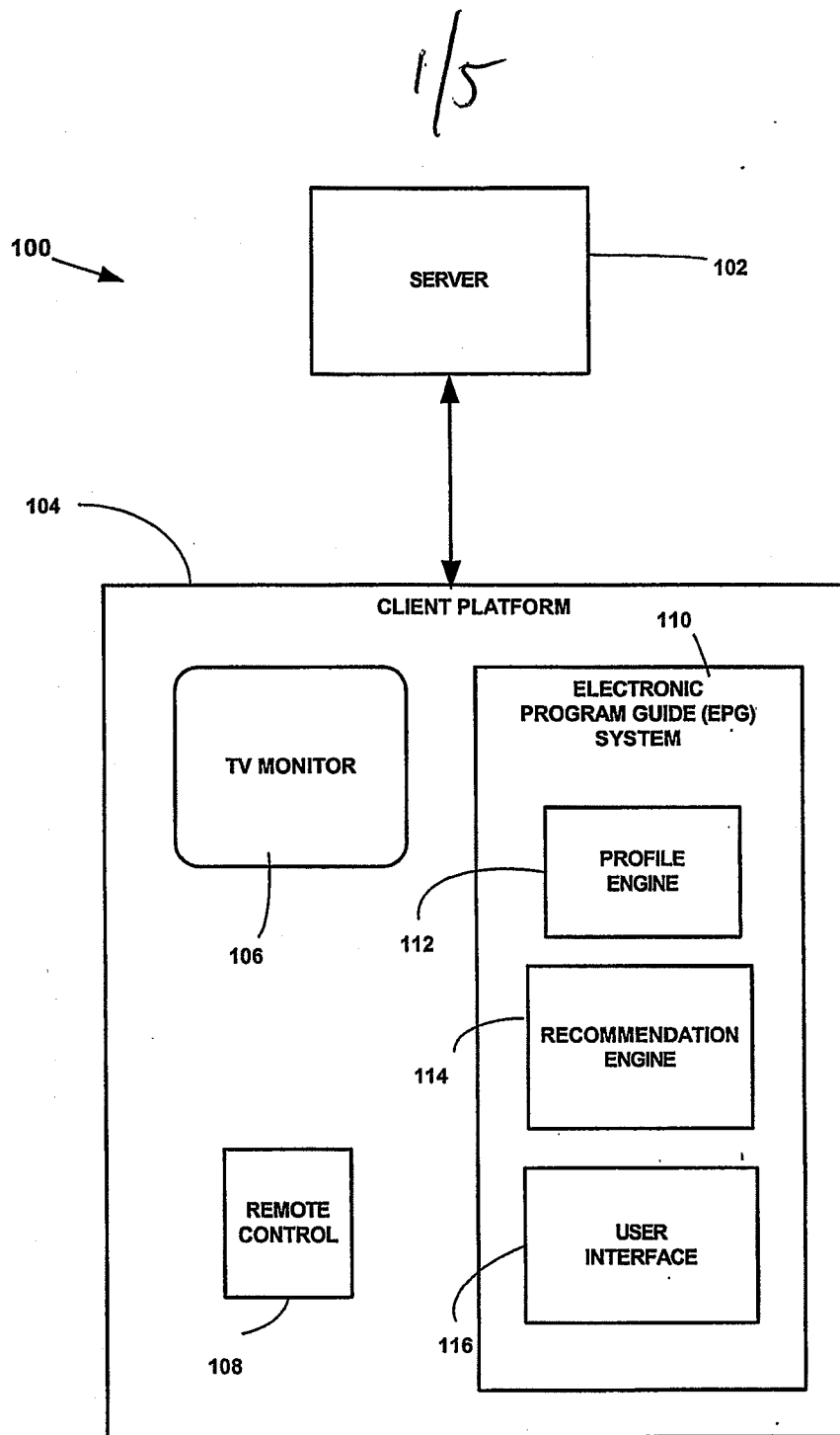


FIGURE 1  
(PRIOR ART)

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120

Cable Television Guide				
1715 Whittier Way				
Cable Channel 1452419				
Monday - 3/18 7PM				
7PM	8PM	9PM	10PM	11PM
<b>7:00 PM</b> The King of Queens Hole's Worship	<b>8:00 PM</b> Rahy Rah First Words	<b>9:00 PM</b> Everybody Loves Raymond Talk to Your Daughter	<b>10:00 PM</b> Borker Talking Points	<b>11:00 PM</b> Family Law Big Brother
<b>8:00 PM</b> Miracle Pets	<b>9:00 PM</b> Touched by an Angel The Hero		<b>10:00 PM</b> Diagnosis Murder The ADCs of Murder	
<b>9:00 PM</b> TV Guide			<b>TV Guide</b>	
<b>9:00 PM</b> The Mexican			<b>Real Sports With Bryant Gumbel</b>	
<b>9:00 PM</b> Public Access			<b>Public Access</b>	
<b>9:00 PM</b> Fear Factor	<b>The Colin Quinn Show</b>		<b>Crossing Jordan With Honor</b>	
<b>9:00 PM</b> Boston Public Chapter Thirty-nine	<b>The American Embassy China Cup</b>		<b>Star Trek: Voyager Non Sequitur</b>	
<b>9:00 PM</b> All-Star Bloopers	<b>Before They Were Stars</b>		<b>Once and Again One Step (Parent) Backward</b>	
<b>9:00 PM</b> 7th Heaven Consideration	<b>Glory Days No Guts, No Glory</b>		<b>Blind Date</b>	<b>Change of Heart</b>
<b>9:00 PM</b> Public Access			<b>Public Access</b>	

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FIGURE 2  
(PRIOR ART)

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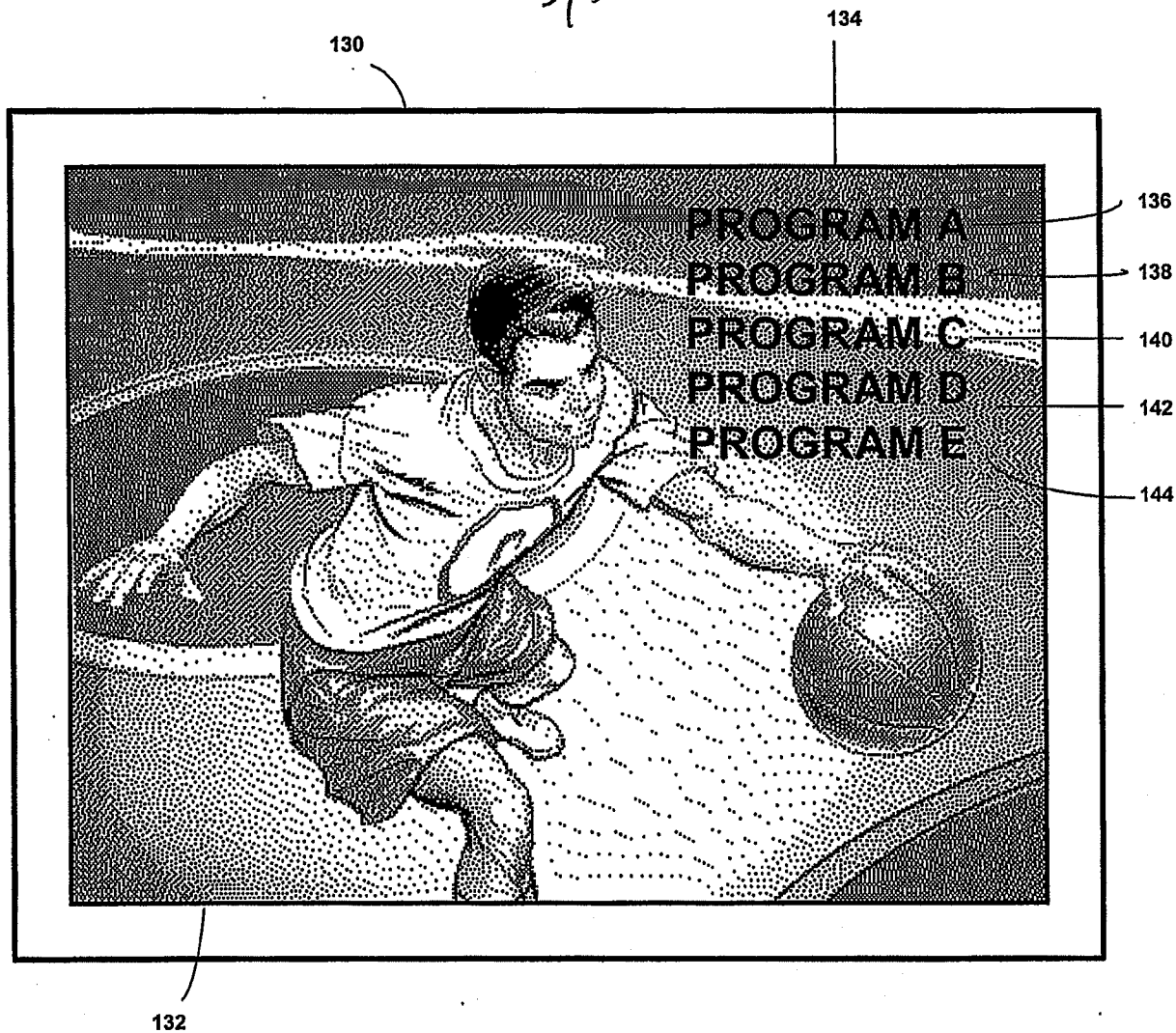


FIGURE 3

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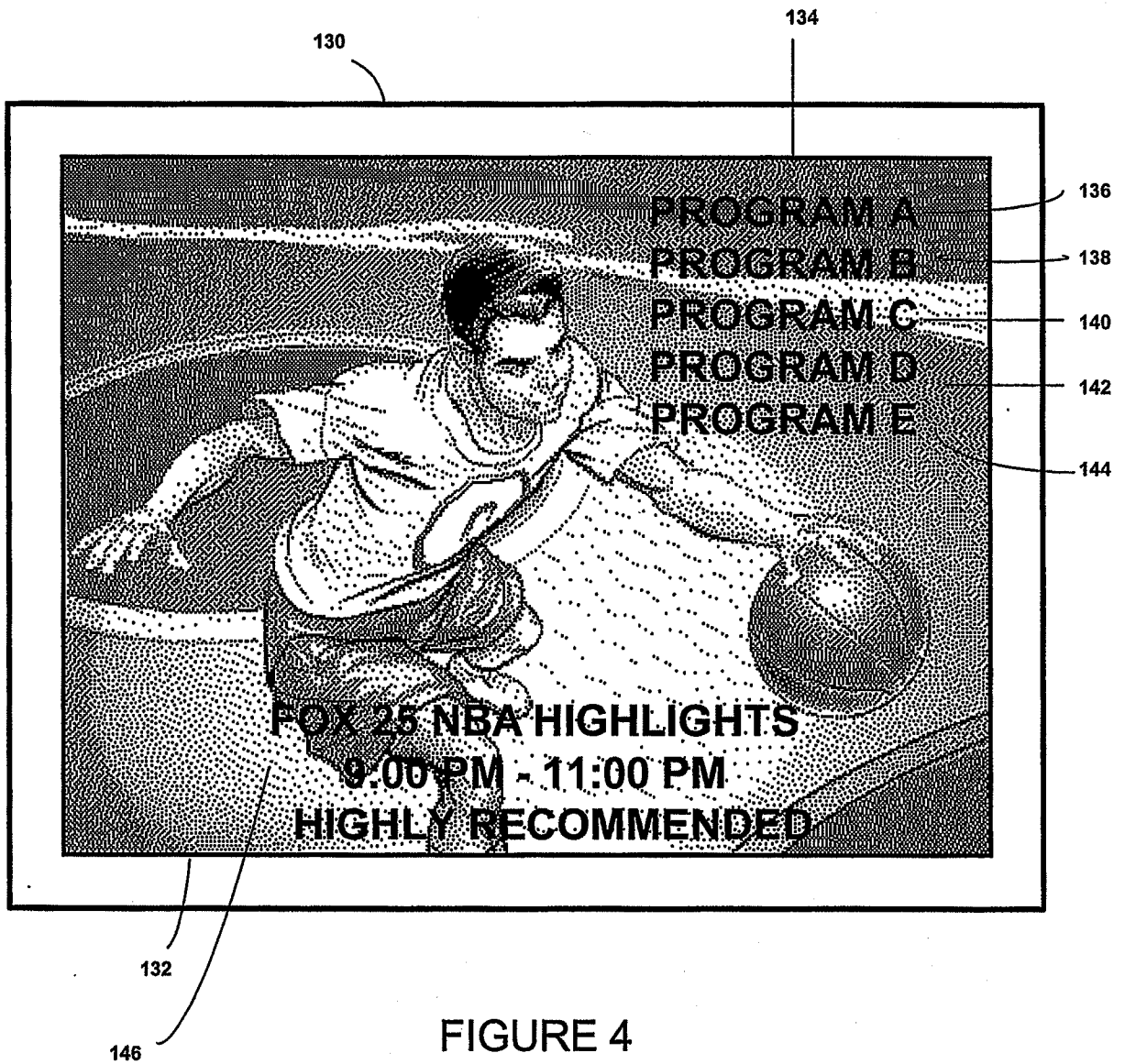


FIGURE 4

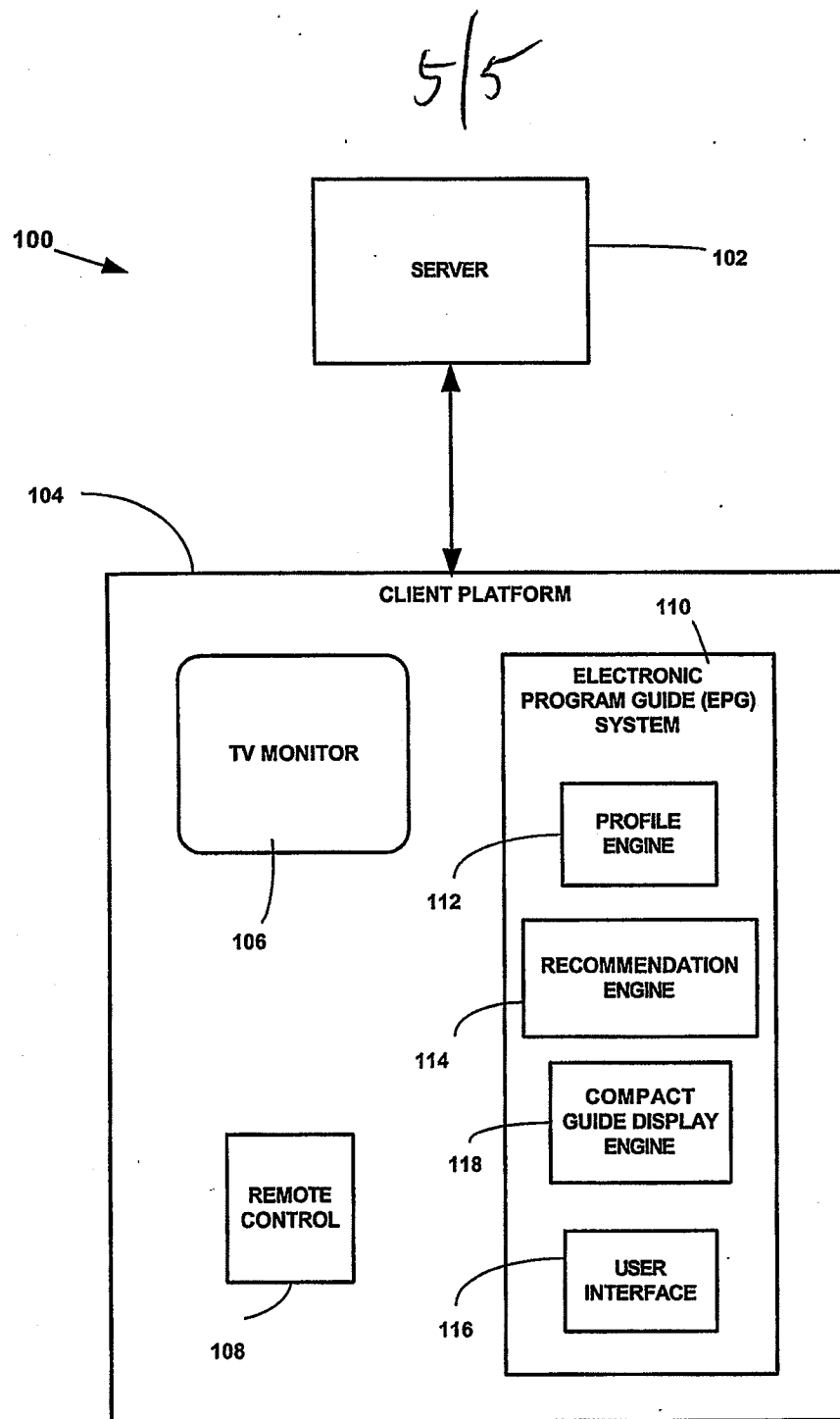


FIGURE 5